



Universität Vechta
University of Vechta

Didactics for educating sustainability competencies – insights from research and practical examples

Sustainable Development in the Institutions of Higher Education

26 April 2016

Museum of S. and S. Lozoraičiai

Kaunas
Lithuania

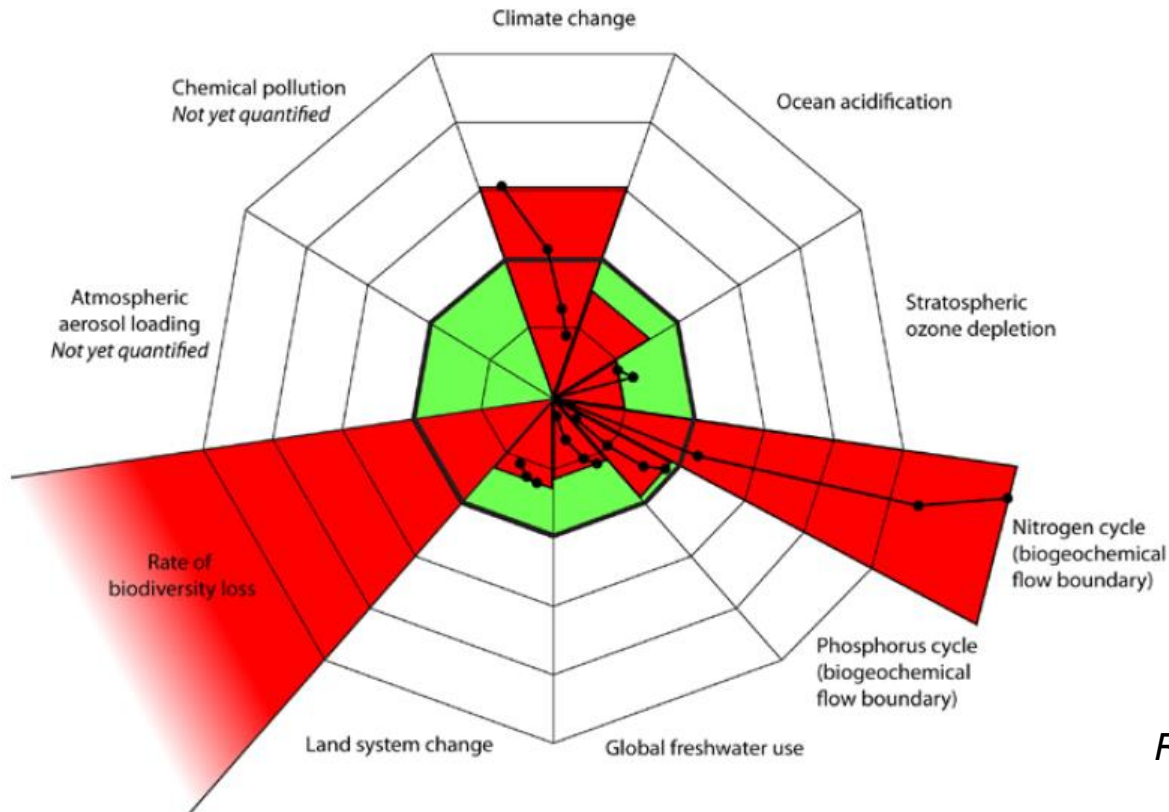


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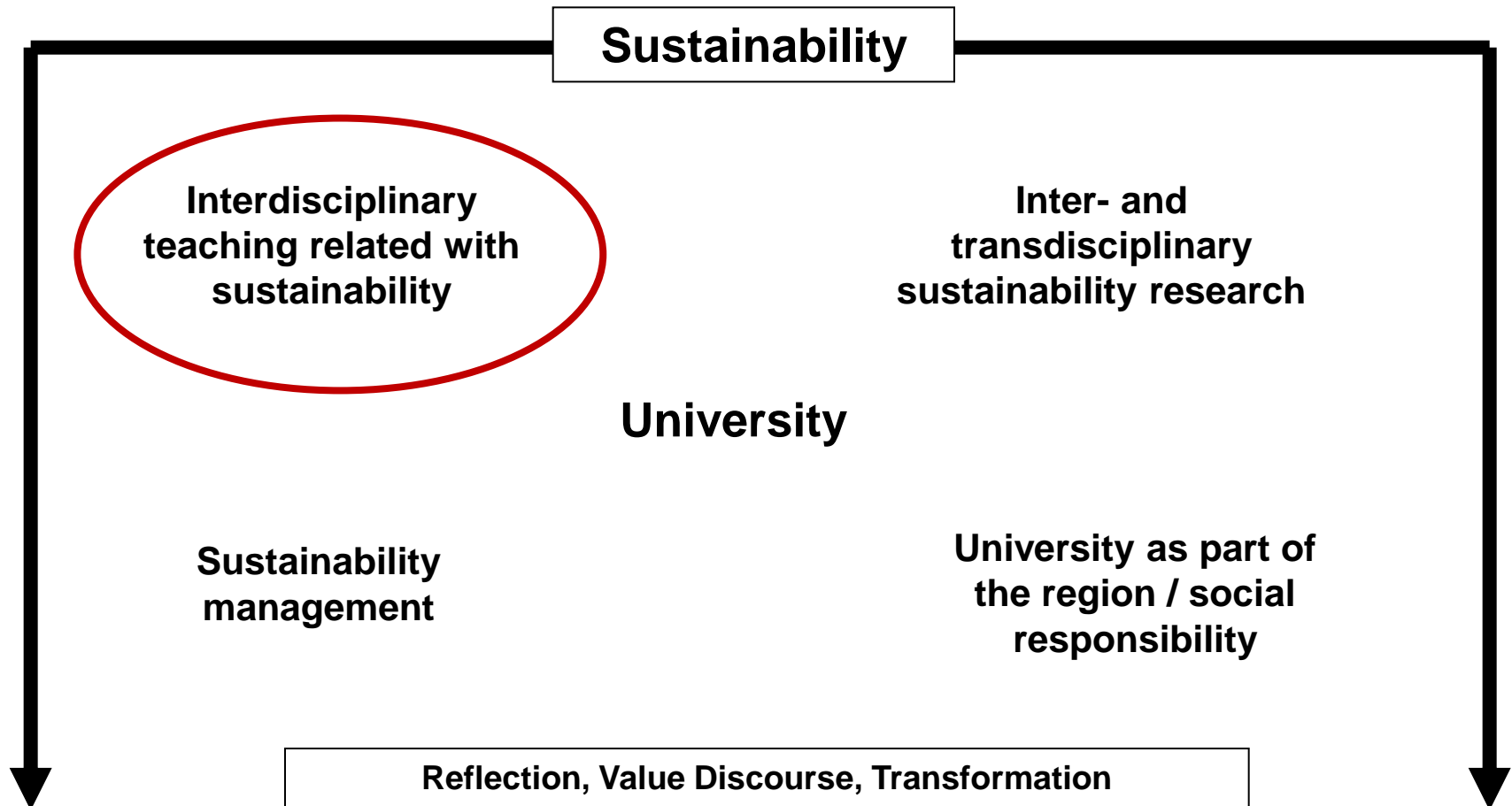
Why is sustainability of relevance for higher education?



Rockström et al., 2009



Why is sustainability of relevance for higher education?

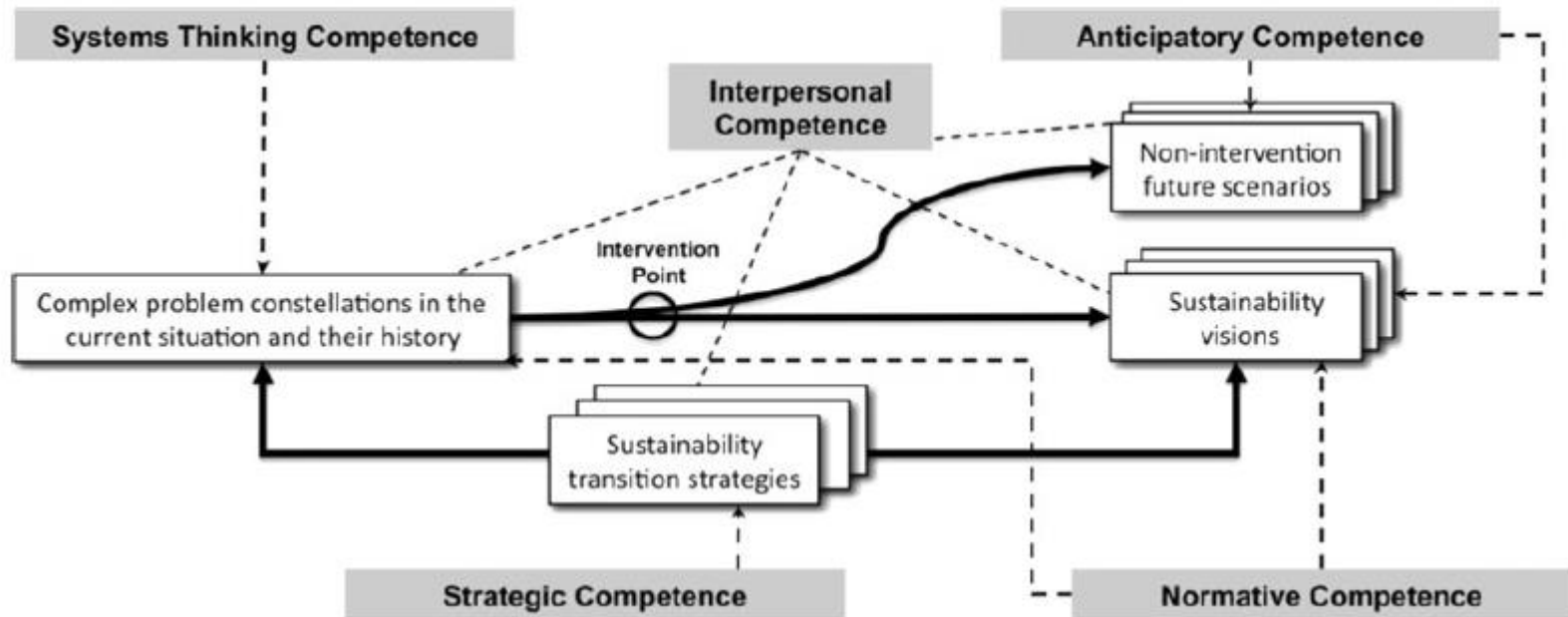


Why is sustainability of relevance for higher education?

- Universities as important actors for shaping the future of the world society in terms of sustainable development “by addressing sustainability through their major functions of education, research and outreach” (Fadeeva/Mochizuki, 2010: 250)
- *Higher Education for Sustainable Development* should promote the development of such key competencies / generic skills which enable individuals to contribute to sustainable development (cf. Barth et al., 2007; Rieckmann, 2012; Wals, 2010; Wiek et al., 2011).



Which sustainability competencies should be facilitated in higher education?



Wiek et al., 2011

Which sustainability competencies should be facilitated in higher education?

Results of the Delphi Study - twelve key competencies crucial for sustainable development:

- Competency for systemic thinking and handling of complexity
- Competency for anticipatory thinking
- Competency for critical thinking
- Competency for acting fairly and ecologically
- Competency for cooperation in (heterogeneous) groups
- Competency for participation
- Competency for empathy and change of perspective
- Competency for interdisciplinary work
- Competency for communication and use of media
- Competency for planning and realising innovative projects
- Competency for evaluation
- Competency for ambiguity and frustration tolerance

Rieckmann, 2012



How can sustainability competencies be developed?

- Competencies cannot be taught, but have to be developed (cf. Weinert, 2001).
- Teaching and learning approaches are needed which are learner-centred and facilitate competence development (cf. Vila et al., 2012; Schaeper, 2009; Barth et al., 2007).
- Universities have to become a learning academia: *shift from teaching to learning*





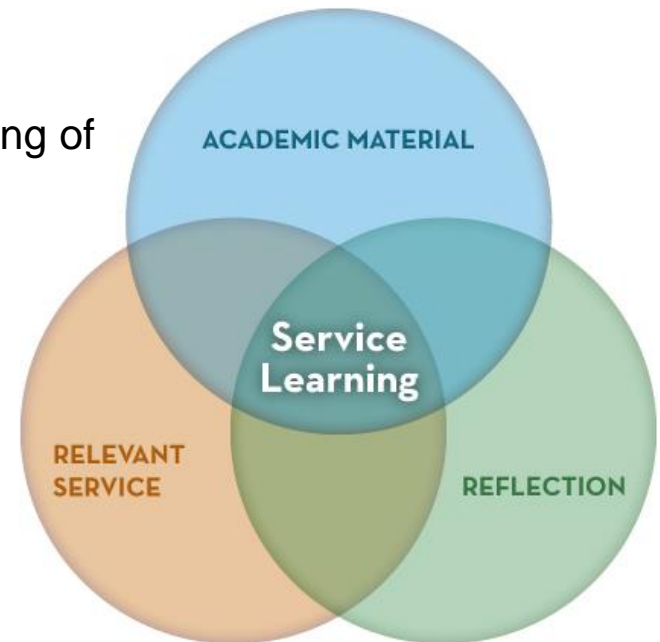
How can sustainability competencies be developed?

- Universities should create teaching and learning settings which facilitate:
 - Self-organised learning
 - Experiential learning
 - Active learning
- Possible teaching and learning approaches:
 - Project-based learning
 - Service learning
 - Research-based learning
 - Inter- and transdisciplinary learning
 - ...



Service learning

- Service learning engages students in active, relevant and collaborative learning.
- Service learning is “a seminar-based, credit-bearing, educational experience in which students (a) participate in an organized service activity that meets identified community needs and (b) reflect on the service activity in such a way to gain further understanding of seminar content, a broader appreciation of the discipline, and an enhanced sense of civic responsibility” (Bringle / Hatcher, 2000: 112).



University of Vechta towards a Sustainable University

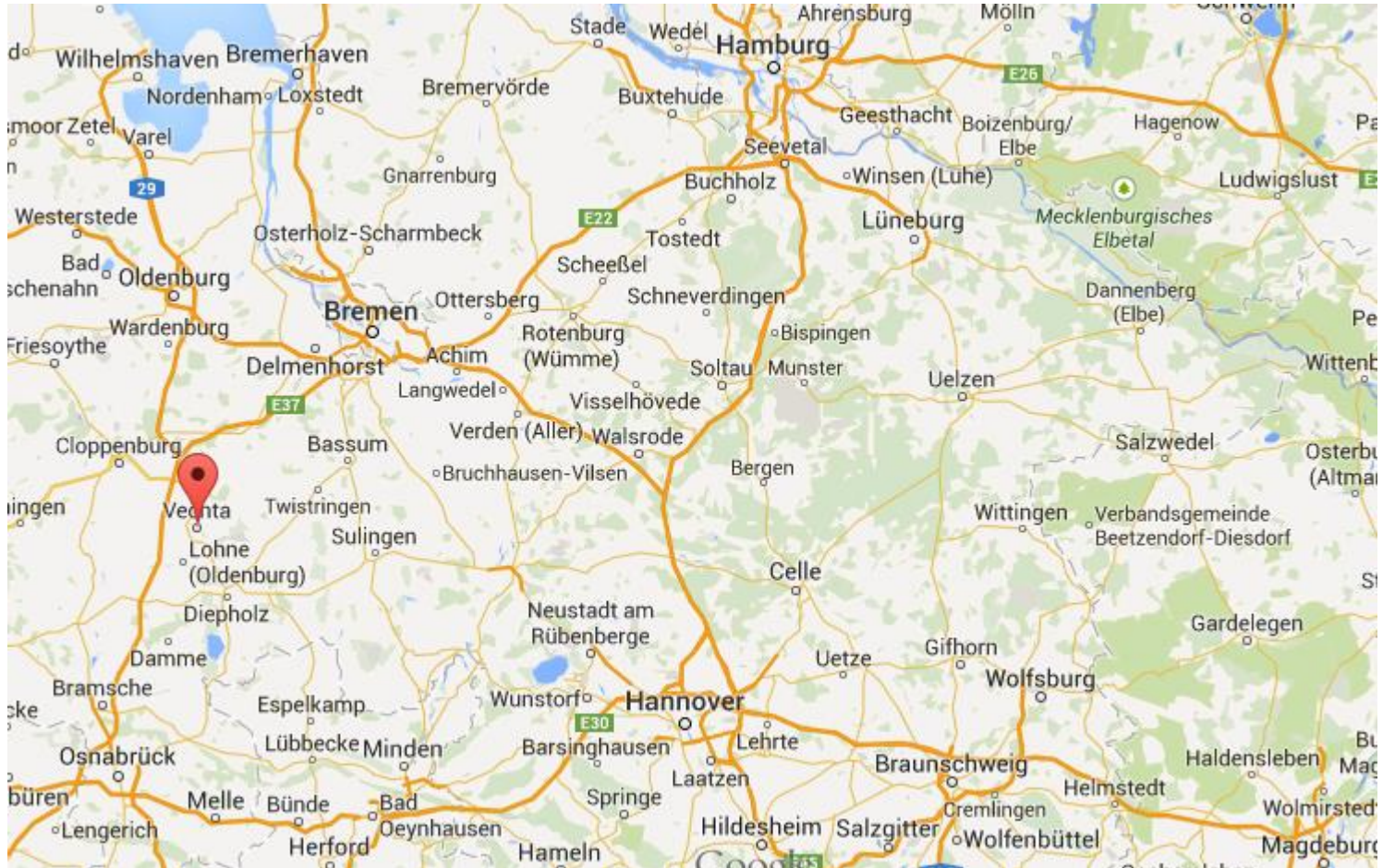
- Working Group Sustainable University (since 2014), Workshops (2015)
- Sustainability Commissioner (since 2015)

- Research projects dealing with sustainable development (e.g. ESD in Teacher Education, CASE project, sustainable agriculture,...)

- Courses on Sustainability in the area of General Studies
- Courses on ESD in teacher education
- Bachelor of Combined Studies: Major in Economics and Ethics

- Student engagement / initiatives (e.g. SNEEP, support for refugees)
- Campus greening

- Centre of Regional Learning
- Regional Centre of Expertise in ESD Oldenburger Münsterland





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Module OB-14 Sustainable Development

Project-based courses with a service learning approach

	Sustainable development in Vechta	Cooperate Sustainability Communication
Period	Winter term 2014/15	Summer term 2015; winter term 2015/16
ECTS	5 CP	5 CP
Students	29	24 / 18
Semesters	3-6	2-6
Programme	Bachelor, General Studies	Bachelor, General Studies
Partners	Local environmental NGO (BUND)	Local enterprises (Lebensbaum; Piepenbrock)

Course „Sustainable Development in Vechta“

- Winter term 2014/15
- 29 students
- Service learning / project-based learning
- Cooperation with an environmental NGO
- 2 phases: theoretical phase, practical phase with student projects
- projects: board game, waste separation, regional products, bicycle mobility, cloth bags at the weekly market

Project work

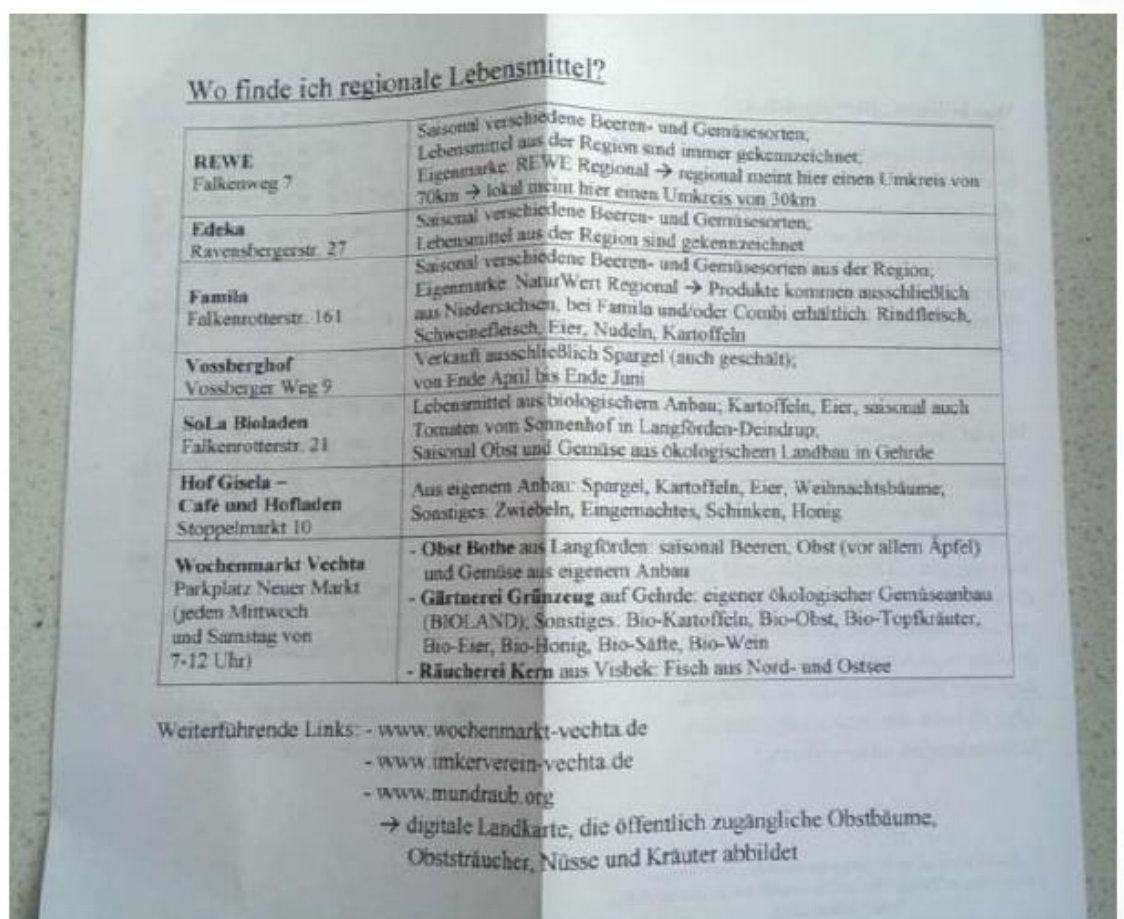
- Project work for promoting sustainable development in Vechta
- In cooperation with the BUND (environmental NGO)

- Identifying a field of action for sustainable development
- Definition of the target group and communication objectives
- Reflecting theory
- Development of a communication concept
- Practical test of the communication concept
- Discussion of results
- Presentation of results
- Report

- Financing: 100 € / project



Projects





Projects



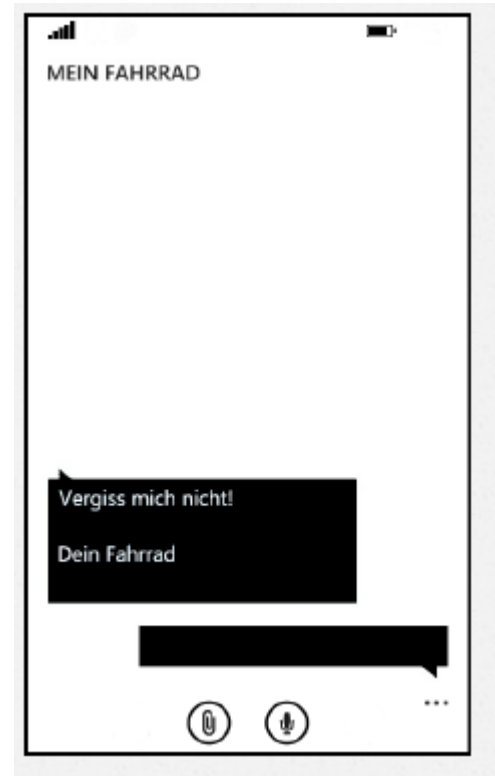
Schon gewusst, dass ...

- ...jeder 2. Weg, der mit dem Auto zurückgelegt wird, kürzer als 6 km ist?!
- ...auf Kurzstrecken, in den ersten 2 km der Spritverbrauch um 50% erhöht ist?!
- ...auf 1000 Einwohner, des Landkreises Vechta, 555 PKWs fallen?!
- ...das Risiko einer Herz- und Kreislauferkrankung lt. WHO bis zu 50% sinkt, wenn Sie täglich Rad fahren?!
- ...eine Studie der University of Bristol ergeben hat, dass Leute, die regelmäßig Fahrrad fahren weniger krank, im Berufsleben kreativer, motivierter und produktiver sind?!

Also Ihre Vorsätze für 2015:

- ✓ Endschnleunigen Sie Ihr Leben, nehmen Sie sich Zeit!
- ✓ Leben Sie gesünder, in dem Sie das nächste Mal den Weg zum Bäcker mit dem Fahrrad zurücklegen!
- ✓ Sparen Sie Sprit- und Verbrauchskosten des PKWs und gönnen Sie sich dafür mehr Aktivitäten mit Ihrer Familie!
- ✓ Denken Sie an Ihre Umwelt!

Ein Projekt der Universität Vechta in Kooperation mit der BUND Kreisgruppe.





Projects



Ongoing: Summer Term 2016

- Project-based course „Sustainable development in the region ‚Oldenburger Münsterland‘: Solving problems with innovative projects“
- Sustainability-driven Entrepreneurship, change makers and sustainable start-ups: projects for facilitating sustainable development
- Using the YooWeeDoo-ChangeMaker platform (<http://www.yooweedoo.org/lernprogramm>)
- Inputs from actors from the region (environmental NGO, farmers‘ association, common economy group,...)

What have teachers to learn?

- Teachers have to facilitate the process of competence development
- Different role: Teachers as facilitators
- Teachers need competencies for implementing ESD (cf. UNECE, 2012)
 - Sustainability competencies
 - Knowledge about ESD teaching and learning approaches
 - Pedagogical competencies for facilitating ESD teaching and learning approaches
- Capacity building for teachers is needed in order to enable them to create learning settings in which students can improve their competencies (cf. Barth/Rieckmann, 2012; UE4SD, 2015).

Conclusion

- Higher Education for Sustainable Development as a key driver for change
- Focus on development of sustainability competencies
- Shift from teaching to learning

- Service learning as one possible approach
- General studies as a “window of opportunity”

- Teachers need ESD competencies
- Teachers as facilitators
- Partners are needed



Thank you very much for your attention!

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References

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